



AF/2812

PTO/SB/21 (08-00)

**TRANSMITTAL
FORM***(to be used for all correspondence after initial filing)*

Total Number of Pages in This Submission

Application Number 09/412,512

Filing Date October 5, 1999

First Named Inventor Shunpei YAMAZAKI

Group Art Unit 2812

Examiner Name R. Booth

Attorney Docket Number 0756-2046

ENCLOSURES (check all that apply)

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|---|--|---|
| <input type="checkbox"/> Fee Transmittal Form | <input type="checkbox"/> Assignment Papers
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| <input type="checkbox"/> Extension of Time Request | <input type="checkbox"/> Petition to Convert to a Provisional Application | <input type="checkbox"/> Other Enclosures |
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| <input type="checkbox"/> Certified Copy of Priority Document(s) | <input type="checkbox"/> Request for Refund | 3. |
| <input type="checkbox"/> Response to Missing Parts/
Incomplete Application | <input type="checkbox"/> CD, Number of CD(s) _____ | 4. |
| <input type="checkbox"/> Response to Missing Parts
under 37 CFR 1.52 or 1.53 | Remarks <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees required or credit any overpayments to Deposit Account No. 50-2280 for the above identified docket number. | 5. |
| | | 6. |

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENTFirm
or

Individual name

Eric J. Robinson, Reg. No. 38,285
Robinson Intellectual Property Law Office, P.C.
PMB 955
21010 Southbank Street
Potomac Falls, VA 20165

Signature

Date

3-24-03

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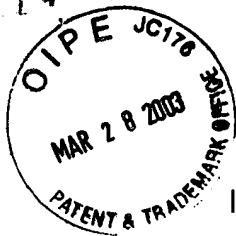
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Attorney Docket No. 0756-2046

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Shunpei YAMAZAKI

Serial No. 09/412,512

Filed: October 5, 1999

For: LIQUID CRYSTAL DISPLAY DEVICE,
ACTIVE MATRIX TYPE LIQUID
CRYSTAL DISPLAY DEVICE, AND
METHOD OF DRIVING THE SAME

) Group Art Unit: 2812

) Examiner: Richard A. Booth

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) Adele M. Stamper

#20
Response
J. McInnis

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RESPONSE TO FINAL OFFICIAL ACTION

Honorable Commissioner of Patents
Washington, D.C. 20231

Dear Sir:

The Final Official Action dated December 24, 2002, has been received and its contents carefully noted. This Response is filed within three months of the mailing date of the Official Action, and therefore Applicants respectfully submit that this response is timely filed without extension of time.

Claims 14-16, 18, 19, 31-36, 39, 40, 43, 44 and 47-57 are pending in the present application, of which claims 14-16, 18 and 19 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Applicants note with appreciation the consideration of the Information Disclosure Statements filed on October 5, 1999, November 23, 1999, April 2, 2001 and July 15, 2002.

The Official Action rejects claims 14-16, 18, 19, 31-36, 39, 40, 43, 44 and 53-57 as obvious based on the combination of JP 09-312260 to Hamatani et al. and U.S. Patent No. 5,236,850 to Zhang. The Official Action also relies on U.S. Patent No. 6,077,731 to Yamazaki et al. and asserts that it is equivalent to Hamatani. The

Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2143-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Although Hamatani may show the steps of irradiating a semiconductor film which includes a metal element for enhancing crystallization with laser light and removing an oxide film from a surface of the semiconductor film by etching after the irradiation of the laser light, Hamatani does not show that an oxide film is formed by irradiation of a laser light, which is a feature of all the independent claims of the present invention. Rather, Hamatani shows eliminating an oxide film which is formed by thermal treatment in an oxidative atmosphere in the range of about 400 to 1100°C (see Yamazaki, col. 13, lines 29-63). In other words, Hamatani uses a furnace annealing method to form the oxide film. Zhang and Yamazaki do not cure the deficiencies in Hamatani. The Official Action relies on Zhang to teach sputtering in an inert atmosphere and on Yamazaki as an alleged equivalent of

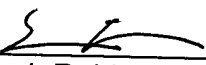
Hamatani. The prior art, whether taken alone or in combination, does not teach or suggest forming an oxide film by irradiation of a laser light. Since Hamatani, Zhang and Yamazaki do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejection of claims 14-16, 18, 19, 31-36, 39, 40, 43, 44 and 53-57 under 35 U.S.C. § 103(a) is in order and respectfully requested.

The Official Action rejects dependent claims 47-52 as obvious based on the combination of Hamatani, Zhang, Yamazaki and U.S. Patent No. 6,146,930 to Kobayashi et al. Kobayashi does not cure the deficiencies in Hamatani, Zhang and Yamazaki as noted above. The Official Action relies on Kobayashi to teach the use of plastic substrates. Since the prior art does not teach or suggest forming an oxide film by irradiation of a laser light, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection of dependent claims 47-52 under 35 U.S.C. § 103(a) is in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,



Eric J. Robinson
Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C.
PMB 955
21010 Southbank Street
Potomac Falls, VA 20165
(571) 434-6789